International Aero Engines

SERVICE BULLETIN

May 26/99

Subject: Transmittal of Revision 2 to Service Bulletin V2500-ENG-79-0067.

Service Bulletin Revision History:

Event	Date
Basic Issue	Sep. 18/98.
Revision 1	Jan. 15/99.
Revision 2	May 26/99.

Reason for Revision:

(1) Add Figure 1.

Effect on Past Compliance:

None.

List of Effective Pages:

Page No.	Revision No.	Effective Date
1	Revision 2	May 26/99.
2 and 3	Initial Issue	Sep. 18/98.
4 to 8	Revision 1	Jan. 15/99.
9	Initial Issue	Sep. 18/98.
10	Revision 2	May 26/99.

International Aero Engines

SERVICE BULLETIN

OIL - MAGNETIC CHIP DETECTOR - INTRODUCTION OF A REVISED MAGNETIC CHIP DETECTOR SUPPLIED BY VICKERS-TEDECO DIVISION

MODEL APPLICATION

V2525-D5
V2528-D5

BULLETIN INDEX LOCATOR

79-22-00

Compliance Category Code

7

Internal Reference No.

EC98VR002

OIL - MAGNETIC CHIP DETECTOR - INTRODUCTION OF A REVISED MAGNETIC CHIP DETECTOR SUPPLIED BY VICKERS-TEDECO DIVISION

1. Planning Information

A. Effectivity

(1) Aircraft:

(a) Boeing-Douglas Product Division MD-90.

(2) Engines:

(a) V2525-D5 Engines prior to Serial No. V20275.

(b) V2528-D5 Engines prior to Serial No. V20275.

B. Concurrent Requirements

None.

C. Reason

(1) Problem

Excessive wear of the locking pin on the Magnetic Chip Detectors (MCD's) can occur.

The problem is caused by the weight and centre of gravity of the pin which affects the vibration characteristics and the magnitude of the forces on the locking pins. In addition, maintenance personnel have mistaken the MCD to be a screw-in type and have attempted to screw the MCD probe out of the housing.

(2) Evidence

The problem has been found on engines in service.

(3) Substantiation

An extensive engineering assessment and tests have been done on the changes introduced by this Service Bulletin. Also, a Controlled Service Introduction on V2500 A1 and A5 engines has successfully accumulated more than 11700 hours to date.

(4) Objective

The purpose of this Service Bulletin is to maintain reliability.

(5) Effect of Bulletin on:

(a) Operation

Not affected.

(b) Maintenance

Not affected.

(c) Overhaul

Not affected.

(d) Repair Schemes

Not affected.

(e) Interchangeability

Not affected.

(f) Fits and Clearances

Not affected.

D. Description

(1) This Service Bulletin introduces an MCD supplied by Vickers-Tedeco Division (VTD), to replace the Muirhead Vactric Components Ltd standard MCD. The VTD MCD is supplied as a complete assembly. The changes introduced are as follows:

(a) The weight and centre of gravity for the probe have decreased.

(b) The quantity of O-Rings installed on the probe, have decreased from 2 to 1.

(c) Should the O-Ring introduced at (b) not be installed after maintenance activity, to prevent leaks along the probe a fail-safe Omni-seal is introduced.

NOTE This seal must not be removed. It will not be supplied as a spare part and therefore has not been identified in the Material Information section.

(d) To visually identify the MCD as a bayonet type design, the bayonet groove has been moved from the inside of the housing to the outside.

(e) The position marks have been changed to make them easier to see.

(f) The housing has been strengthened and an additional O-Ring has been introduced in the self-closing valve.

E. Compliance

Category Code 7

R Accomplish when there are no superceded parts remaining.

F. Approval

The part number changes and/or part modifications are given in section 2 and 3 of this Service Bulletin. They comply with the applicable Federal Aviation Regulations and are FAA-APPROVED for the engine models listed.

R G. Manpower

In Service	Not applicable.
At Overhaul	No additional time is necessary to embody this Service Bulletin.

NOTE: It is possible to get access to the parts affected by this Service Bulletin at overhaul.

H. Material - Price and Availability

(1) A modification kit is not necessary.

(2) Refer to 2. Material Information for the prices and availability of future spares.

I. Tooling - Price and Availability

Special tools are not neccessary.

J. Weight and Balance

(1) Weight Change

Plus 0.4 lb (0,18 kg).

(2) Moment Arm

15.1 in (383,5 mm) Forwards of Datum.

(3) Datum

Engine Front Mount Centreline (Power Plant Station - PPS 100).

K. Electrical Load Data

The aircraft electrical load is not affected by this Service Bulletin.

L. References

None.

M. Other Publications Affected

(1) MD-90 Aircraft Maintenance Manual (AMM), Chapter/Section 79-22-45, Removal/Installation.

(2) D5 Engine Manual (EM), Chapter/Section 72-00-60 Removal-02 and Installation-03.

(3) Illustrated Parts Catalogue (IPC), Chapter/Section 79-22-45.

R 2. Material Information

A. Kits necessary for this Service Bulletin:

None.

B. Parts affected by this Service Bulletin:

	NEW PART No. (ATA No.)	QTY	EST'D UNIT PRICE ($)	PART TITLE	OLD PART No. (IPC No.)	INSTR DISP
	AS43003-908 (79-22-45)	5		.Ring, sealing toroidal	- (01-098)	(1D)
	1A6794 (79-22-45)	5		.Chip, magnetic-detector assembly - oil scavenge (V97484)	- (01-100)	(A)(B)
	1A6794-1 (79-22-45)	1		..Probe, magnetic - oil scavenge (V97484)	VB3505 (01-150)	(A)(S1)(4D) (5D)
	1A6794-2 (79-22-45)	1		..Body unit - valve, self- closing - oil scavenge (V97484)	VB3522-2 (01-160)	(A)(S1)(4D) (5D)
	M83248-1-012 (79-22-45)	1		..Seal, ring - body (V81349)	- (01-163)	(A)(B)
R R	- (79-22-45)	1		..Ring, sealing - probe (V81349)	44066 (01-170)	(4D)(6D)
	AS43003-908 (79-22-45)	1		.Ring, sealing toroidal	- (02-098)	(2D)
	1A6794 (79-22-45)	1		.Chip, magnetic - Detector assembly - angle gearbox assembly (V97484)	- (02-100)	(A)(B)
	1A6794-1 (79-22-45)	1		..Probe, magnetic - angle gearbox assembly (V97484)	VB3505 (02-150)	(A)(S1)(4D)
	1A6794-2 (79-22-45)	1		..Body unit - valve, self- closing - angle gearbox assy (V97484)	VB3522-2 (02-160)	(A)(S1)(4D)

	NEW PART No. (ATA No.)	QTY	EST'D UNIT PRICE ($)	PART TITLE	OLD PART No. (IPC No.)	INSTR DISP
R	M83248-1-012 (79-22-45)	1		..Seal, ring - body (V81349)	- (02-163)	(A)(B)
R R	- (79-22-45)	1		..Ring, sealing - probe (V81349)	44066 (02-170)	(4D)(7D)
	AS43003-908 (79-22-45)	1		.Ring, sealing toroidal	- (03-098)	(3D)
	1A6794 (79-22-45)	1		.Chip, magnetic - Detector assembly - casting, de-oiler (V97484)	- (03-100)	(A)(B)
	1A6794-1 (79-22-45)	1		..Probe, magnetic - casting, de-oiler (V97484)	VB3505 (03-150)	(A)(S1)(4D)
	1A6794-2 (79-22-45)	1		..Body unit - casting, de-oiler (V97484)	VB3522-1 (03-160)	(A)(S1)(4D)
	M83248-1-012 (79-22-45)	1		..Seal, ring - body (V81349)	- (03-163)	(A)(B)
R R	- (79-22-45)	1		..Ring, sealing - probe (V81349)	44066 (03-170)	(4D)(7D)

NOTE: The unit prices, if shown, are an estimate and they are given for the purpose of planning only. For actual prices, refer to IAE Price Catalog or contact IAE's spare parts sales department.

R C. Instruction Disposition Codes:

(1) (A) New part will be available from April 1999.

(2) (B) Additional.

(3) (S1) Old and new parts are not interchangeable.

(4) (1D) Transferred from ATA chapter 79-22-45 fig-item 01-165.

(5) (2D) Transferred from ATA chapter 79-22-45 fig-item 02-165.

(6) (3D) Transferred from ATA chapter 79-22-45 fig-item 03-165.

(7) (4D) Indentation level at ATA location has changed from one to two.

(8) (5D) Quantity at this ATA location has not changed, but has been converted from an engine quantity of 5 off to the assembly quantity of 1 off.

(9) (6D) Engine quantity reduced from 10 off to 5 off and converted to an assembly quantity of 1 off.

(10) (7D) Quantity reduced from 2 off to 1 off.

3. Accomplishment Instructions

A. Rework Instructions

None.

B. Assembly Instructions

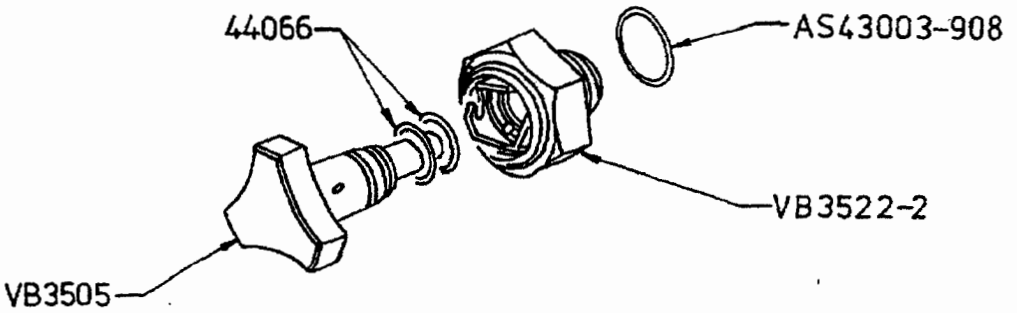
(1) For the correct removal/installation procedures refer to the manuals that follow:

(a) MD-90 Aircraft Maintenance Manual (AMM), Chapter/Section79-22-45, Removal/Installation.

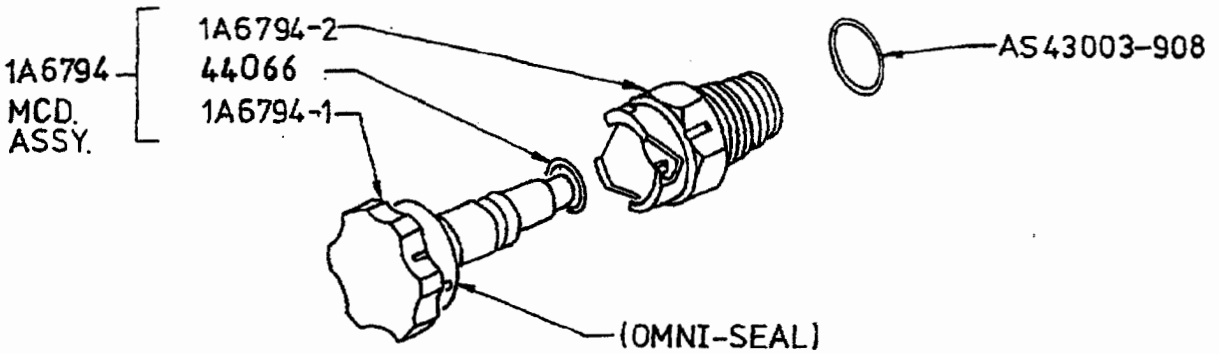
(b) D5 Engine Manual, Chapter/Section 72-00-60, Removal-02 and Installation-03.

C. Recording Instructions

A record of accomplishment is necessary.



PRIOR TO ALTERATION



AFTER ALTERATION

ded0003070

R Installation of magnetic chip detectors - Before and after alteration
R Figure 1